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The Effect of New Market-Rate Housing Construction on the Low-Income Housing Market

Evan Mast
W.E. Upjohn Institute

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EMPLOYMENT RESEARCH

The Effect of New Market-Rate Housing Construction on the Low-Income Housing Market

Evan Mast

ARTICLE HIGHLIGHTS

■ *There is a heated debate on whether building new housing will improve affordability. I use household migration data to study this question.*

■ *I find that migrants to new central city multifamily buildings come from neighborhoods with slightly lower incomes, and migrants into these neighborhoods come from areas with still lower incomes, and so forth.*

■ *Using a simulation model, I find that 100 new market-rate units ultimately create 70 vacancies in middle-income neighborhoods. These openings should lower prices, but the effect may be small in the least expensive areas, where prices are close to the marginal cost of providing housing.*

Housing costs and the share of income spent on housing are rising rapidly in many large cities, inspiring a heated debate on the appropriate policy response. “Yes-In-My-Backyard” (YIMBY) groups advocate for market-based strategies that relax regulation and increase housing construction. Their rationale is Economics 101: increasing supply decreases prices.

Opposing groups argue that the YIMBY position is flawed because unsubsidized new housing is typically much more expensive than the housing units that are affordable to middle- and low-income households. They claim that these types of housing are so different that new construction is irrelevant to rents and home prices faced by low-income households, and they advocate for subsidized housing and voucher programs instead of new market-rate construction.

Prior research has shown that new housing depreciates and “filters” to become affordable over the course of decades, but little is known about shorter timeframes of, say, three to five years—a horizon that is quite relevant to the acute housing crunch at the center of the current debate.

One common theory is that a “migration chain” mechanism could quickly link expensive new housing to cheaper types of housing. Some households who would have otherwise occupied cheaper units move into new units, reducing demand and lowering prices for the units they leave vacant. The process iterates when a second round of households moves into the units the first round left vacant. This ripple effect spreads out further and further, eventually reducing prices in middle- or low-income areas. However, if different parts of the housing market (like new construction and low-income neighborhoods) are strongly separated, with little cross-migration, the chain may never actually reach areas most in need.

I use data on household address histories to directly examine this mechanism and shed light on

Individuals frequently move to neighborhoods that are slightly different from their previous neighborhoods, but they rarely make large jumps.

the effect of new housing on the market for lower-income housing. I highlight three main findings:

- 1) Individuals frequently move to neighborhoods that are slightly different from their previous neighborhoods, but rarely make large jumps. This implies that there are divisions between segments of the market, but they are frequently crossed.
- 2) New construction is connected to low-income areas through a series of moves. To show this, I identify residents of new multifamily buildings in large cities, their previous address, the current residents of those addresses, and so on. This sequence quickly adds income areas from the bottom half and even the bottom fifth, consistent with strong migratory connections.
- 3) New construction opens the housing market in low-income areas by reducing demand. A simulation model suggests that building 100 new market-rate units sparks a chain of moves that eventually leads 70 people to move out of neighborhoods from the bottom half of the income distribution, and 39 people to move out of neighborhoods from the bottom fifth. This effect should occur within five years of the new units’ completion.

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The Ripple Effect of Migration Chains

The intuition behind the migration chain mechanism is simple—new housing creates a ripple effect that gradually reaches areas that are more and more different from the new housing itself. A person may move from their old unit that rented for \$2,500 to a new unit that costs \$3,000, and another person may move from a \$2,000 apartment to the unit the first person vacated. As this chain continues, it may add housing units that are affordable to middle- and low-income households.

However, the importance of this mechanism in the real world is complicated by the fact that a chain can end in each round. For example, if a new condo is purchased to be used as a second home, the buyer does not vacate their previous unit and the

chain never starts. Similarly, a chain could end because a unit is filled by a new household, such as a young adult moving out of her parents' house. If the unit is filled by a household from outside of the region, the subsequent benefits no longer accrue to the area that actually built the housing. The effect of new housing on lower-income areas will be stronger the longer chains last, as there will be more opportunities to reach such an area.

The other key factor influencing the power of migration chains is the strength of migratory connections between lower-quality housing and new housing. If there is a part of the market that is very separated from new housing—suppose, for example, that few people move from low-income areas to middle-income areas—the chain will not reach that area.

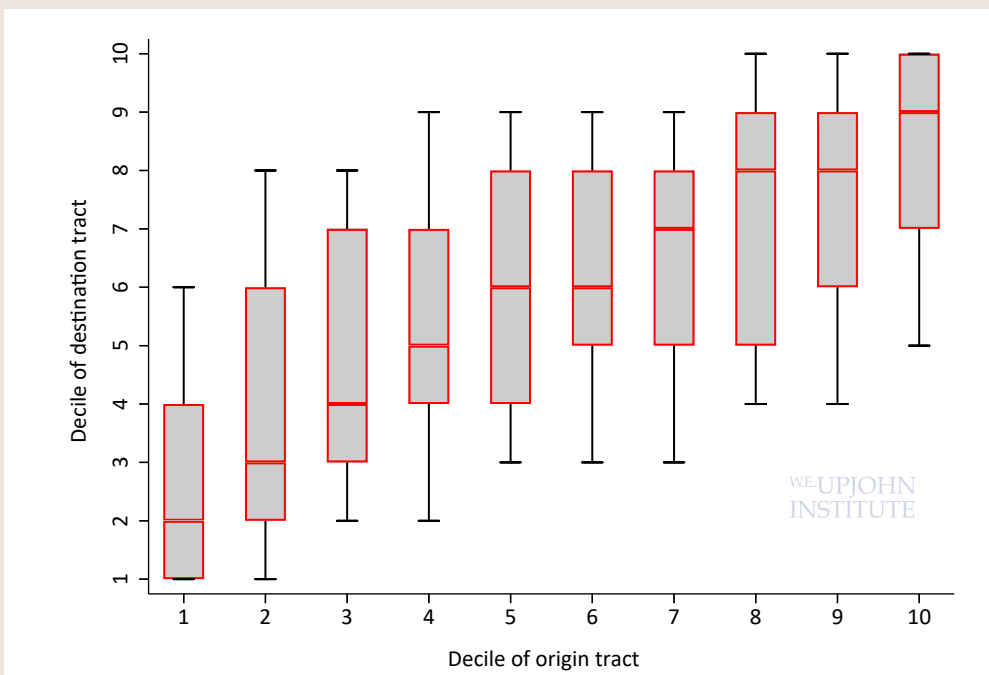
Migratory Connections between New Construction and Low-Income Areas

Because migratory connections are a crucial determinant of migration chains' effect, I start by using address history data from Infutor Data Solutions, a marketing intelligence company, to broadly examine how people move across neighborhoods in the Chicago metropolitan area.¹ Figure 1 shows how migrants' destinations depend on where they originated. There are 10 boxes, one for each tenth, or decile, of the neighborhood (as defined by census tracts) household income distribution, with the poorest origin neighborhoods on the left and the richest on the right. Each box shows the range of household income, again in deciles, for the destination neighborhoods. For example, among movers from the second-lowest neighborhood income decile, the bottom 10 percent end up in the poorest neighborhoods, but the median mover reaches the third income decile of neighborhood income, the top quarter reach at least the sixth decile, and the top 10 percent reach the eighth decile.

Individuals originating in top decile income tracts very rarely move to a below-median income neighborhood, and few people from lower deciles migrate above the median. While this suggests that divisions between types of neighborhoods exist, these barriers appear to be permeable. Individuals frequently move from the seventh decile to the ninth, the sixth to the fourth, etc. The top decile and lower deciles are connected through a series of moves, which is precisely the sort of connectivity the migration chain mechanism requires.

I next sharpen focus to the migratory connections between new construction and low-income areas and track moves at the building level. I identify 686 large, new, market-rate multifamily buildings in 12 large central cities and track 52,000 of their

Figure 1 Migration between Neighborhoods with Different Income Levels



NOTE: The figure shows the relationship between origin and destination neighborhood income of movers within the Chicago metropolitan area. Neighborhood income is ranked and grouped into tenths, or deciles. Each box represents the middle 50 percent of movers from a given origin neighborhood income decile, with the horizontal red line in the box representing the median mover; the whiskers represent the bottom and top tenths of movers from the neighborhood income decile.

SOURCE: Author's calculations using data from Infutor Data Solutions and the U.S. Census Bureau.

current residents to their previous buildings of residence. I then find the tenants currently living in those buildings and track them to their previous residence, iterating for six rounds and, in order to focus on local connectivity, keeping only within-metro-area moves in each round.

Results are shown in Figure 2. About 20 percent of residents moving into the new buildings came from neighborhoods (census tracts) with household incomes below the median for that metro area; this proportion rises steadily to 40 percent in round six. Similar patterns emerge for other characteristics, suggesting strong chained mobility connections between different types of neighborhoods. These relationships are inconsistent with the idea of a highly segmented market in which new construction does not affect low-income areas. The results also highlight the geographically diffuse nature of migration chains—only 30 percent of movers in round six originate within the principal city of the metro area. This means that market mechanisms will reach a wide set of neighborhoods, but also makes it less likely that any particular neighborhood will be affected.

Simulation Model

While these statistics on migratory connections are useful for showing general characteristics of the housing market, they do not quantify the effect of new housing on the lower-income market. To do this, I simulate a richer model that allows migration chains to end and considers other real-world complications. The simulation allows me to estimate an intuitive metric of a new unit's effect on other types of neighborhoods. For each type of neighborhood—for example, those with household incomes below the metro area median—I define the number of “equivalent units” a new market-rate housing unit creates as the probability that its migration chain

reaches that type of neighborhood before ending. The intuition is simple: when a household leaves a neighborhood, it has an effect similar to building another (depreciated) unit in that neighborhood. The household that left reduces demand by one, while building a unit increases supply by one—either way, the result is a newly vacant unit. This metric fits naturally in the policy debate, where “inclusionary zoning” ordinances require developers to build some income-restricted units for each market-rate unit.

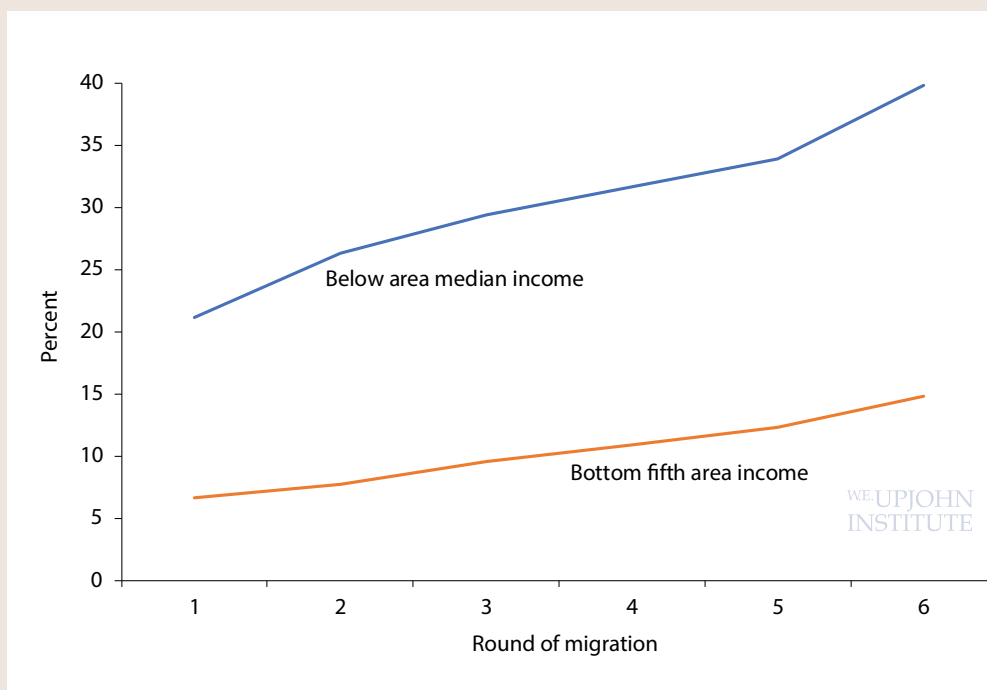
The simulation results suggest that market-rate construction has an important effect on the middle- and low-income housing markets. In my baseline specification, 100 new market-rate units create 70 equivalent units in neighborhoods with household incomes below the metro area median, and 39 in neighborhoods with household incomes from the bottom fifth. This should open these housing

markets and lower prices, all else equal, though I do not directly estimate these implied effects. Notably, however, the simulation implies these equivalent units are created within five years of the completion of the new building.

Policy implications

My results suggest that new market-rate housing construction can improve the market for housing in low- and middle-income neighborhoods, even in the short run. The effects are diffuse and appear to benefit diverse areas of a metropolitan area. Policies that increase market-rate construction are thus likely to improve affordability even for housing units that bear little similarity to the new construction. These results also suggest that if policymakers expend the political capital required to get new housing proposals through the often subjective and onerous approval process, there are

Figure 2 Types of Neighborhoods Included in Migration Chain from New Housing



NOTE: The figure plots the percentage of individuals in each round of the migration sequence whose origin neighborhood had the selected characteristics.

SOURCE: Author's calculations using data from Infutor Data Solutions and the U.S. Census Bureau.

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likely to be benefits throughout the region.

However, there are several shortcomings of the migration chain mechanism, particularly in the lowest-cost and most-rent-burdened neighborhoods. Census tracts in the bottom fifth of household income and the top fifth of rent burden (rent as a share of income) have an average vacancy rate of 12.8 percent, compared to 8.1 percent in the rest of my sample. Given that rents are generally already low in such neighborhoods, this suggests that reducing demand through the migration chain mechanism is unlikely to lower costs further, perhaps because rents have reached the minimum cost of housing. Moreover, there may also be important amenity effects if the migration chain reduces population in these areas, such as reduced retail options, school closures, or increased crime. Vouchers or policies that lower the cost of housing (such as reductions in property tax or utility rates) may be necessary to lower prices in this segment of the market.

In addition, while I focus on regional implications, new buildings could have very different effects on their immediate area, where they may change amenities or household composition in ways that affect prices. There is little existing direct evidence on how these factors change following new construction, and this could be a fruitful area for future research.

Note

1. I focus on one metropolitan area because there is large variation across both race and income in large cities. Results are similar for other areas.

This article draws on research from an Upjohn Institute working paper, which can be found at https://research.upjohn.org/up_workingpapers/307.

Evan Mast is an economist at the Upjohn Institute.

Medical Innovation and the Employment of Cancer Patients

R. Vincent Pohl

Cancer is the second-most common cause of mortality and morbidity in developed countries. In addition to its direct costs in terms of quality-adjusted life years lost, it also contributes to the economic costs of disease as cancer patients often reduce their working hours or cease employment completely.

Recent decades have seen increased innovation in the treatment of many types of cancer. Pharmaceutical innovation has resulted in new chemotherapy drugs—often used in combinations—that are more effective in targeting tumors while reducing harm for healthy body tissue. In addition, new surgical techniques alleviate side effects and lead to shorter recovery times.

I investigate whether medical innovation in the treatment of breast and prostate cancers, which are the most common types of cancers among women and men, respectively, also lead to a reduction in the economic costs of cancer. Specifically, I use large administrative databases from Canada to estimate how the employment effect of a cancer diagnosis is moderated by medical innovation. I employ a difference-in-differences strategy combined with matching to estimate the causal effect of a cancer diagnosis and how it changes with medical innovation.

Confirming previous research, I first find that a cancer diagnosis reduces employment by 2 to 4 percentage points. Second, the cumulative medical innovation that improved cancer treatment during the 1990s and 2000s led to a decrease in the negative employment effects of prostate and breast cancer by about 65 percent. Hence, the approval of additional drugs and the introduction of other medical technologies over this time period are associated with a substantial reduction in the economic costs of cancer. Finally, I consider the employment effects of cancer diagnoses and medical innovation by cancer patients' education. I find that the benefits of innovation are limited to individuals with postsecondary education, while cancer patients with lower levels of education experience a larger decline in employment.

From a policy perspective, these results suggest that innovations in cancer treatment may provide benefits beyond direct medical effects. As innovative cancer treatments can be very expensive, it is therefore important to account for economic benefits such as smaller reductions in labor income and, as a result, tax revenue when determining whether the benefits of a new treatment option outweigh its cost. The heterogeneous effects

ARTICLE HIGHLIGHTS

- *Innovations in cancer treatment may alleviate the economic costs of cancer diagnoses, such as a decline of labor supply.*
- *I find that medical innovation reduces the negative employment effect of cancer diagnoses by about 65 percent during the study period.*
- *The economic benefits of medical innovation are limited to cancer patients with postsecondary education, raising concerns about equal access to new treatments.*